



TOMOSYNTHESIS: AN IMPORTANT NEW TOOL IN THE WAR AGAINST BREAST CANCER

Pamelya Herndon, Executive Director
Southwest Women's Law Center

Newsweek

February 24, 1997 : \$2.95

EXCLUSIVE: Madeleine Albright
Talks About Her Hidden Past

MAMMOGRAPHY AND BREAST CANCER: MORE THAN JUST MEDIA HYPE!

The Medical Controversy:
When Should You Start?

PLUS

New Technology for
Detecting Breast Cancer

#BXNDJLX*****CAR-KT 101**R-004
#000099141700016MY99 NI-BK 02867
DR MICHAEL LINVER 445496
6504 AVENIDA LA CHULA P009010
ALBUQUERQUE NM 87107-5637

FEBRUARY 18, 2002

www.time.com AOL Keyword: TIME

TIME

CANCER

- The Smartest Drugs
- The Gentlest Treatments
- The Latest on Mammograms

#BXNDJLX*****CAR-KT 101**R-004
#0632 5228 3508 TD 10130001 JRM04
MICHAEL LINVER-MD 0004
801607
6504 LA CUCILLA NW P00247
ALBUQUERQUE NM 87107-5637

OCTOBER 16, 2003

TIME Investigation:
Tipping the
Scales of Justice
In Alabama

**Stay-at-Home
Dads: Why
Real Men
Change Diapers**

**Overdoing a Good
Thing: How Yoga
Might Be Bad for
Your Health**



TIME

**Why
Breast
Cancer
Is Spreading
Around
The World**

Plus: A guide to
the latest treatments

2015





When breast cancer is detected **before** it has spread to the lymph nodes, the five year survival rate is

98%



Most common cancer in women: one woman in 8 by age 95 (20% <50)

–5 to 10% is hereditary breast cancer (these linked to ovarian cancer too)

How Does 3D Mammography (Breast Tomosynthesis) Work?



The Value of 2D **Plus** Breast Tomosynthesis

Tomosynthesis Imaging vs. 2D Alone

- **Breast cancer screening with tomosynthesis finds many more cancers than conventional 2D mammography¹**
- **Tomosynthesis gives radiologists the confidence to significantly reduce recall rates²**
- **Masses, distortions and asymmetric densities are better visualized with breast tomosynthesis³**
- Skaane P, Gullien R, Eben EB, et. al. Reading time of FFDM and tomosynthesis in a population-based screening program. Radiological Society of North America annual meeting. Chicago, IL, 2011.
- FDA PMA submission P080003
- Bernardi D, Ciatto S, Pellegrini M, et. al. Prospective study of breast tomosynthesis as a triage to assessment in screening. Breast Cancer Res Treat. 2012 Jan 22 [Epub ahead of print].

AND OTHER RECENT STUDIES:



MAMMOGRAPHY

1000 screens

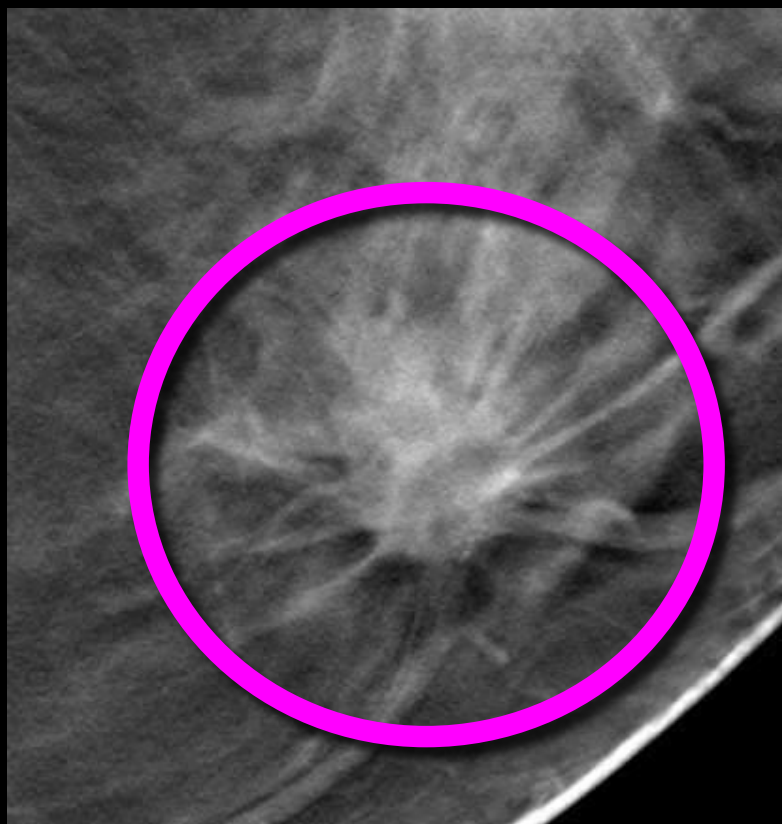
100 recalls

20 biopsies

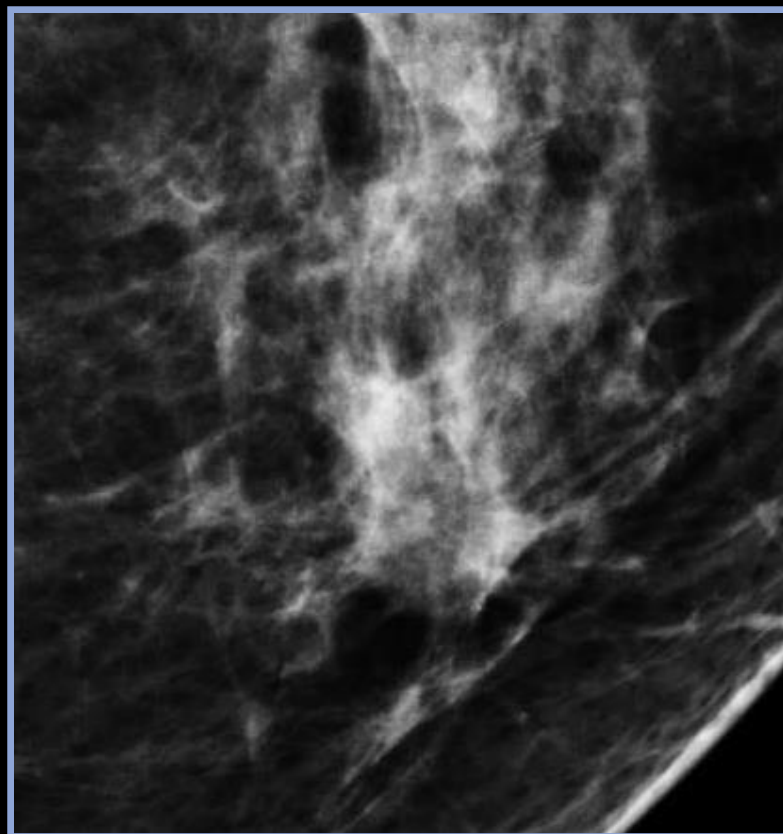
4 cancers
(1 missed)

Gur et al. Trends in Recall, Biopsy, and Positive Biopsy Rates for Screening Mammography... Radiology, May 2005; 235: 396 - 401.





3D



2D

**What is the scientific
evidence that tomography
works?**





2-D CONVENTIONAL DIGITAL MAMMOGRAPHY vs 2-D PLUS 3-D TOMOSYNTHESIS

● 12,631 Screening Studies

- ⇒ 2-D Digital Mammo alone: 6.1/1000 detect. rate
- ⇒ 2-D + 3-D Tomosynthesis: 8.1/1000 detect. rate
- ⇒ Difference: 25% increase in cancer detection rate with tomosynthesis (25 more cancers)
- ⇒ False Positive rate: Decreased by 15% (61/1000 vs. 53/1000) with tomosynthesis

Skaane P, Bandos AI, Guillien R, et al. Comparison of digital mammography alone with digital mammography plus tomosynthesis in a population-based screening program. **Radiology 2013, vol. 267: pp. 47-56.**



2-D CONVENTIONAL DIGITAL MAMMOGRAPHY vs 2-D PLUS 3-D TOMOSYNTHESIS

- **Single practice study: 23,355 examinations**
 - ⇒ **2-D Digital Mammo alone: 4.0/1000 detect. rate (2.8 invasive cancers/1000)**
 - ⇒ **2-D + 3-D Tomosynthesis: 5.4/1000 detect. rate (4.3 invasive cancers/1000)**
 - ⇒ **Difference: 35% increase in cancer detection rate with tomo (53% increase in invasive ca's)**
 - ⇒ **Recall rate: Decreased by 37% (87/1000 vs. 55/1000) with tomosynthesis**

Rose SL, Tidwell AL, Bujnoch LJ, et al. Implementation of Breast Tomosynthesis in a Routine Screening Practice: An Observational Study. **AJR 2013 (June); Vol. 200: pp. 1401-1408.**



2-D CONVENTIONAL DIGITAL MAMMOGRAPHY vs 2-D PLUS 3-D TOMOSYNTHESIS

- **Single practice study: 59,617 examinations**
 - ⇒ **2-D Digital Mammo alone: 4.9/1000 detect. rate (3.2 invasive cancers/1000)**
 - ⇒ **2-D + 3-D Tomosynthesis: 6.3/1000 detect. rate (4.6 invasive cancers/1000)**
 - ⇒ **Difference: 29% increase in cancer detection rate with tomo (44% increase in invasive ca's)**
 - ⇒ **Recall rate: Decreased by 16% (162/1000 vs. 136/1000) with tomosynthesis**

Greenberg JS, Javitt MC, Katzen J, et al. Clinical performance Metrics of 3D Digital Breast Tomosynthesis Compared with 2D Digital Mammography for Breast Cancer Screening in Community Practice. **AJR 2014 (September); Vol. 203: pp. 687-693.**



2-D CONVENTIONAL DIGITAL MAMMOGRAPHY vs 2-D PLUS 3-D TOMOSYNTHESIS

- **Multi-center study: 454,850 examinations**
 - ⇒ **2-D Digital Mammo alone: 4.2/1000 detect. rate (2.9 invasive cancers/1000)**
 - ⇒ **2-D + 3-D Tomosynthesis: 5.4/1000 detect. rate (4.1 invasive cancers/1000)**
 - ⇒ **Difference: 29% increase in cancer detection rate with tomo (41% increase in invasive ca's)**
 - ⇒ **Recall rate: Decreased by 15% (107/1000 vs. 91/1000) with tomosynthesis**

Friedewald SM, Rafferty EA, Rose SL, et al. Breast Cancer Screening using Tomosynthesis in Combination with Digital Mammography. **JAMA, June 25, 2014; Vol. 311 (24): 2499-2507.**

**CURRENT STUDIES SHOW
THAT TOMOSYNTHESIS IN
THE SCREENING SETTING
TRULY CAN FIND MORE
CANCERS, AND DECREASE
THE RECALL RATE, AT THE
SAME TIME!**

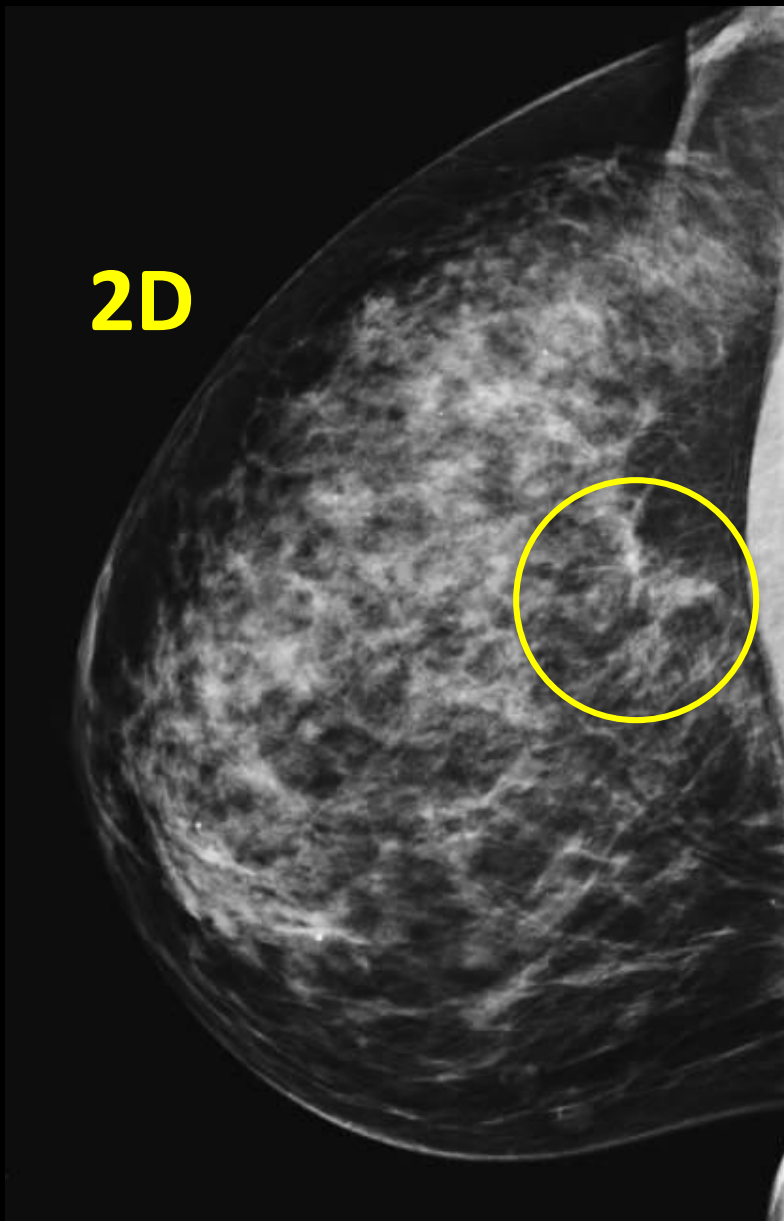


Let's take a look:

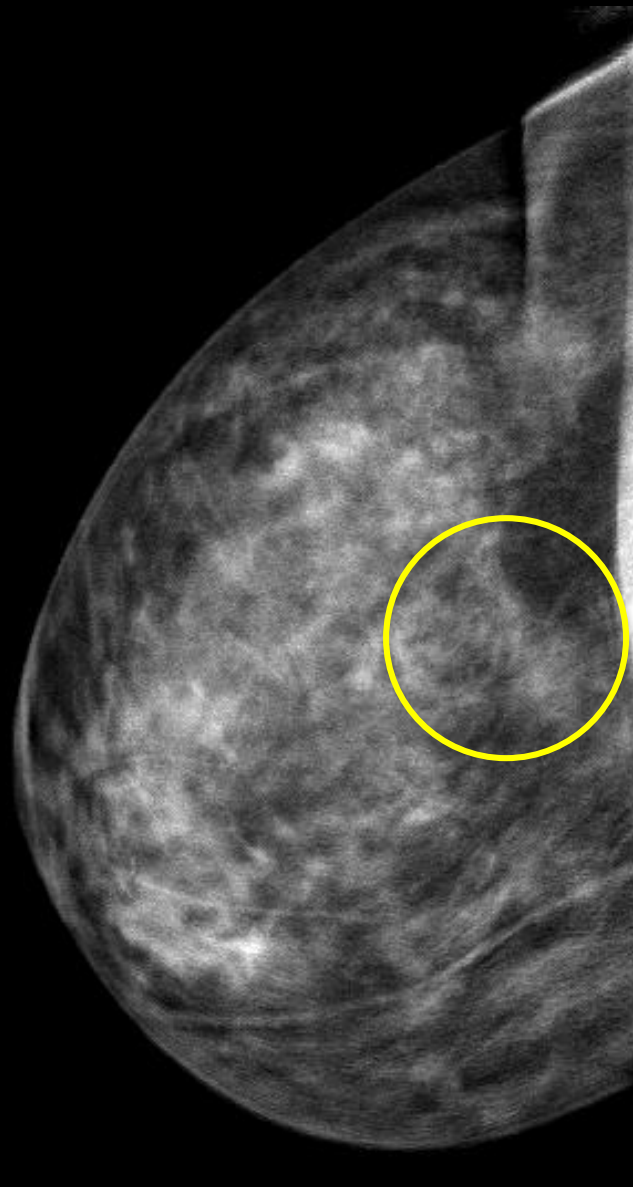


Tubulolobular Adenocarcinoma

2D



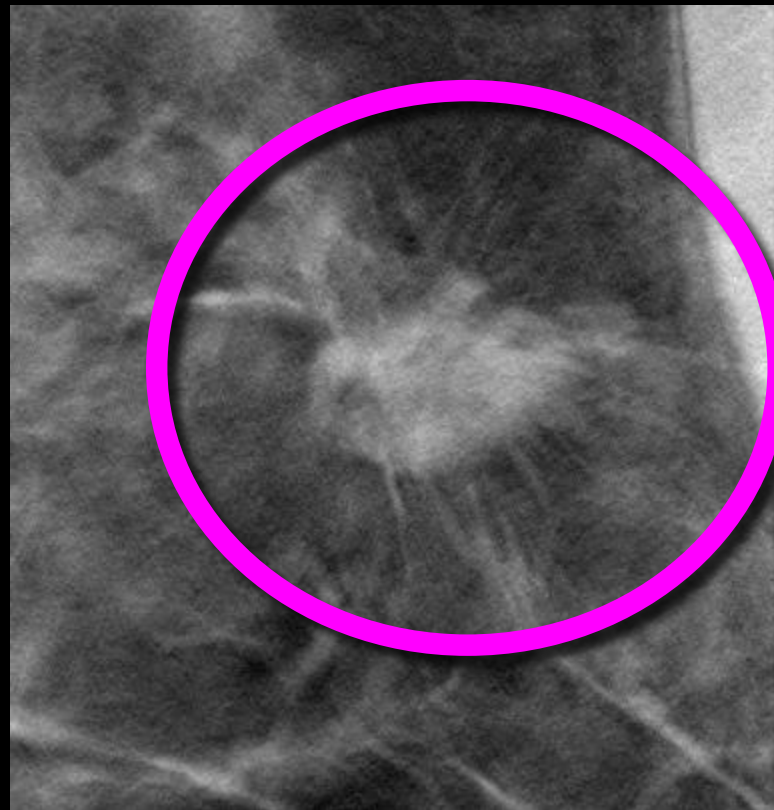
3D



Digital Mammo (2D)



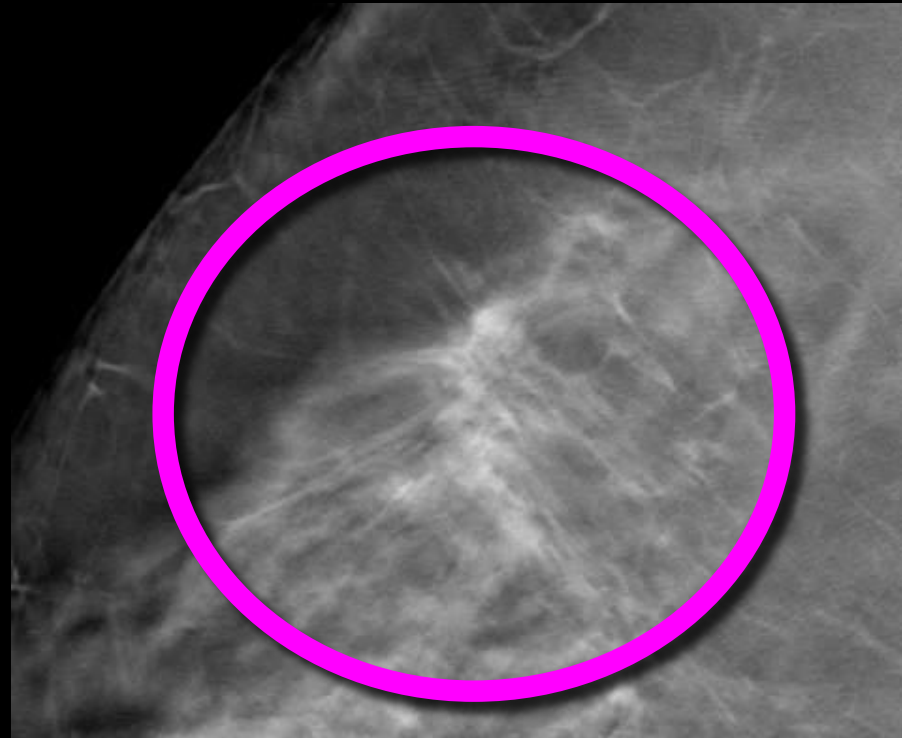
Tomo Slice (3D)



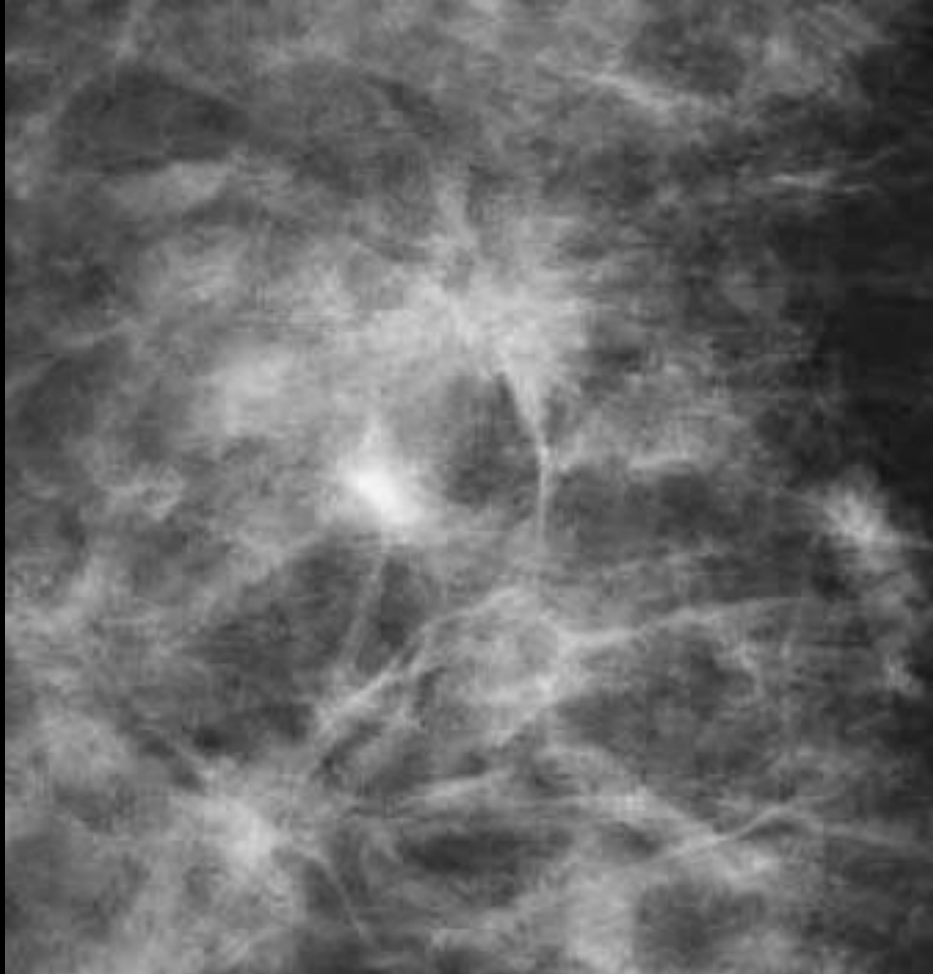
2D



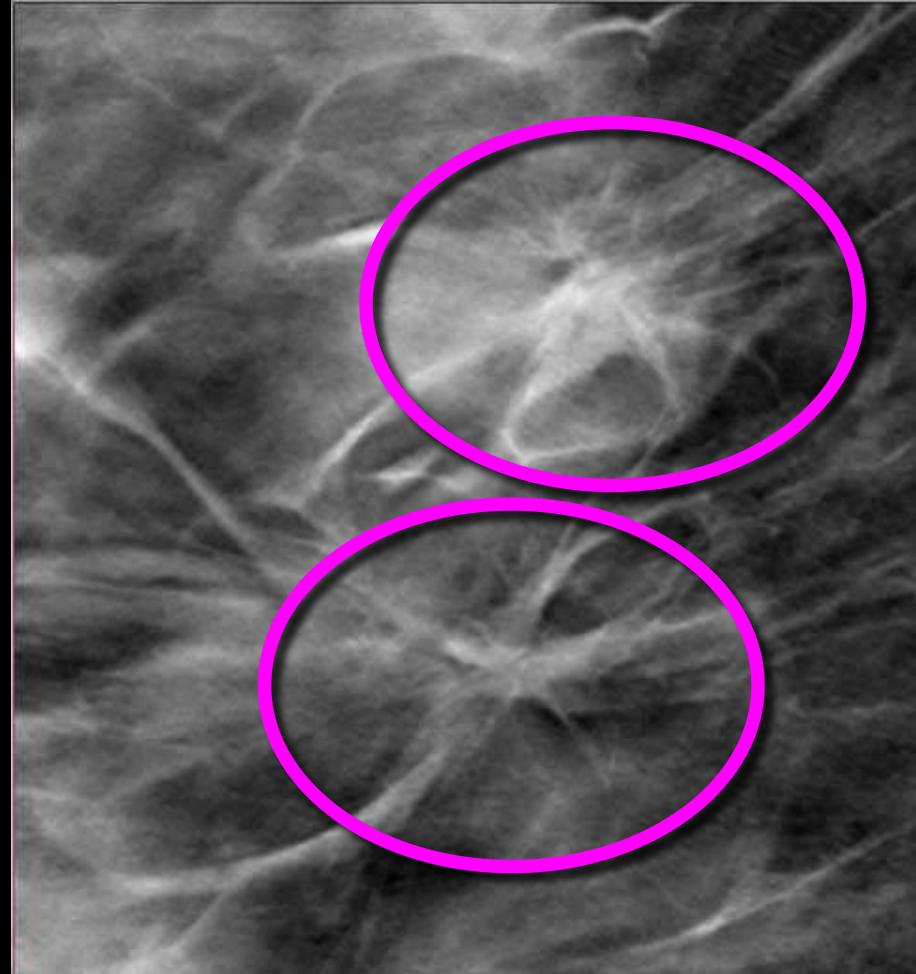
Tomo Slice (3D)



Digital Mammo (2D)



Tomo Slice (3D)



**NOW WE CAN SAVE LIVES
LIKE NEVER BEFORE,**

**AND - WE CAN CALL LESS
PATIENTS BACK TO DO SO!**

(A REAL WIN-WIN SITUATION!)



Current program Improve Women's Access to Healthcare

Celebrate Good Health Protocols for Women in New Mexico



Reduce Recall Rate

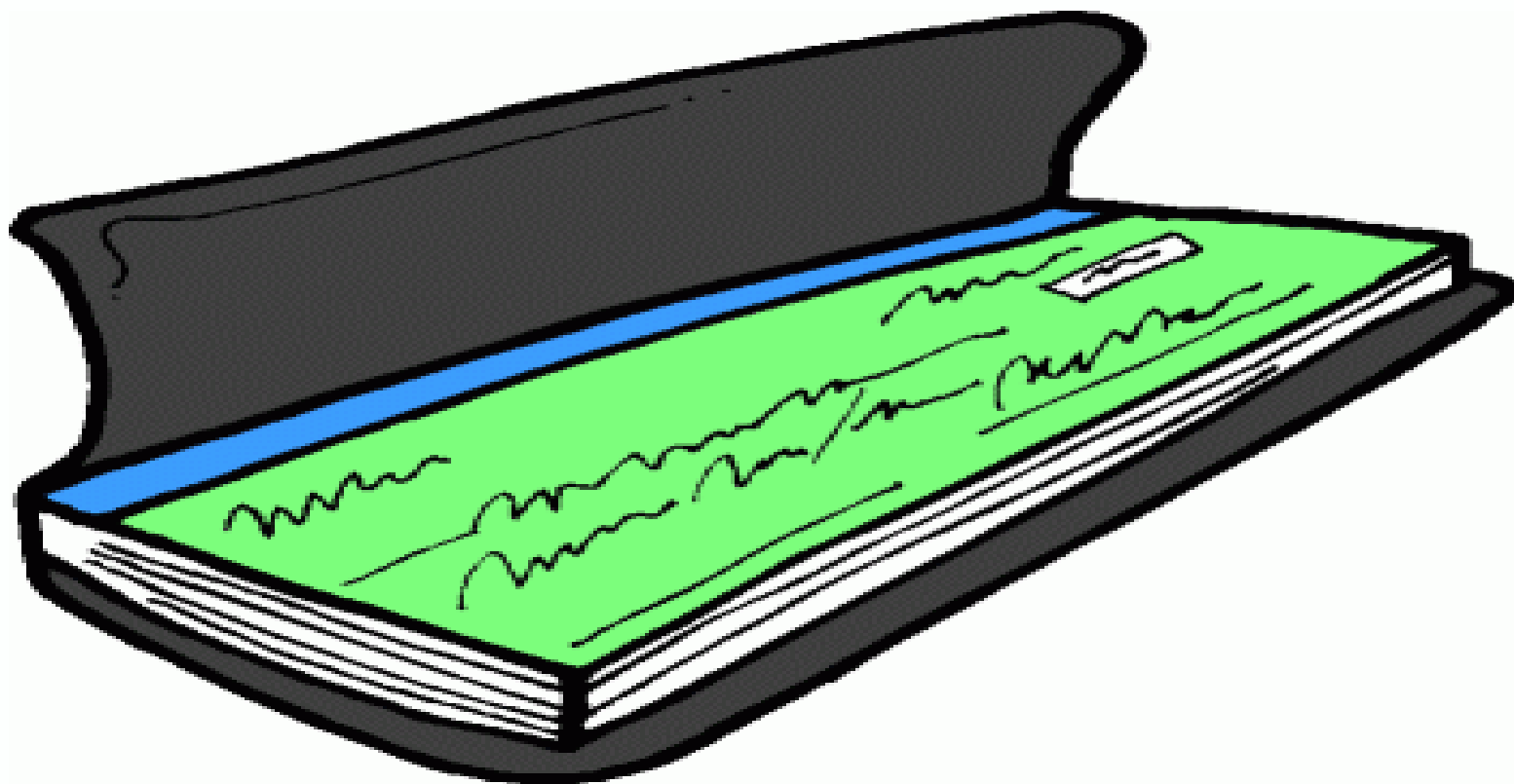
Start a Protocol for Treatment much earlier

Please Approve our Request for Saving Women's Lives



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www.workinlife.com

Support \$500,000 Tomosynthesis Funding for Low Income Women



Questions?

Pamelya Herndon

Executive Director

Southwest Women's Law Center

pherndon@swwomenslaw.org

505-244-0502